

# **COLUMBIA RIVER TECHNICAL MANAGEMENT TEAM**

June 10, 2015

## **Facilitation Team's Summary**

Facilitator, Emily Plummer; Notes, Tory Hines DS Consulting

*The following Facilitator's Summary is intended to capture basic discussion, decisions and actions, as well as point out future actions or issues that may need further discussion at upcoming meetings. These notes are not intended to be the "record" of the meeting, only a reminder for TMT members.*

### **Water Supply Forecast**

Doug Baus, COE-NWD, and Mary Mellema, BOR, provided updates on the official June water supply forecast, which is posted on the TMT website. Mary noted the volumes for the final June forecast for Hungry Horse Dam:

- June-July: 515 kaf (60%)
- January-July: 2,026 kaf (97%)
- April-August: 1,382 kaf (71%)
- May-September: 1,076 kaf (64%)

Mary also noted that the minimum flows downstream of Hungry Horse are as follows:

- Columbia Falls: 3,500 cfs
- Hungry Horse: 900 cfs

Doug provided official June forecasts for USACE projects:

- The Dalles April-August: 61.6 maf (70%),
- Lower Granite April-July: 11 maf (54%),
- Libby April-August: 5,090 kaf (86%), and
- Dworshak April-July: 1,113 kaf (42%); June-July: 228 kaf (25%)

### **Operations Update**

Mary Mellema, BOR, provided an operations update noting that Grand Coulee pool elevation is at 1,266.5ft and the project is operating to target refill. Hungry Horse elevation is at 3,547.82ft with outflows of 2.5kcfs.

### **Treaty Fishing SOR 2015-C3 and SOR 2015-C4**

Tom Lorz, CRITFC, provided an overview of the Treaty Fishing SORs on behalf of the Columbia River Inter-Tribal Fish Commission members. SOR 2015-C3 was successfully implemented from June 2-5<sup>th</sup>. The SOR requested Bonneville, The Dalles and John Day operate the respective pools within a 1.5 foot band during the treaty fishing period. SOR 2015-C4 requests the same reservoir operations in Zone 6, beginning on Tuesday, June 9, 2015 0600 hours through Thursday, June 11, 2015, 1800 hours. Tom extended appreciation to the Corps for implementing the SORs throughout the season and indicated that CRITFC, if able, will inform the Corps of the next SOR request by Friday.

- **ACTION:** The Corps will implement SOR 2015-C4 beginning on June 9th at 0600 hours through June 11 at 1800 hours.

### **Dworshak/Lower Granite Water Temperature**

Steve Hall, USACE-Walla Walla, provided an update on Dworshak and Lower Granite water temperatures. He noted that air and water temperatures are climbing as a result of recent warm weather. Currently, Lower Granite tailwater temperature is approaching 64 degrees Fahrenheit and climbing. Sunday, June 7, the project refilled and has since drafted slightly. He continued that current temperature modeling shows the heat wave will subside in the next week; however, Lower Granite water temperatures are forecasted to approach 68 degrees Fahrenheit by early next week. Steve reported that the project may need to initiate water temperature augmentation towards the end of this week or the weekend. Currently, Steve expects to continue passing inflow, about 3 kcfs, until the models suggest that it is time to start augmentation.

Joe Skalicky, USFWS, asked when temperature augmentation typically begins, Steve noted that the models suggest temperature augmentation is running 2 to 3 weeks earlier than the average. He also noted that if temperature augmentation starts mid-June, depending on how the water is utilized, it is possible elevations will reach 1,535ft by mid-August, thus exhausting the augmentation water. Charles Morrill continued that this time of year target water temperatures for the hatchery are between 43 and 44 degrees Fahrenheit, currently the temperature release is around 42 degrees Fahrenheit. Joe noted that temperatures are a few degrees cooler than normal at the hatchery; however, the hatchery is not too concerned about temperature impacts at this point. Steve and Joe will continue to coordinate with the hatchery.

Steve noted that in prior weeks, deeper depths of water were warmer due to wind mixing; Russ Kiefer, ID, noted that temperatures are in the 14 to 15 degree Celsius range which requires more effort to keep lower elevations cooler. Steve added that not a lot of cold water has been released, as the season continues Lower Granite temperatures will increase. Doug asked what outflows should be expected if temperature augmentation starts on Saturday. Steve indicated that the objective is to stay below 68 degrees Fahrenheit with a discharge between 7-7.5kcfs. He shared that this is a judicious decision to stretch the water as far as possible into the summer, while not exceeding temperature criteria. Charles asked if there was any information from last year's discussion regarding wind equipment in the pools. Steve noted that the weather equipment will be procured, however the Corps is still in the contracting phase at this point. Steve concluded that the Corps will update TMT members via e-mail if the temperature augmentation begins before the next TMT meeting.

**The next TMT meeting is a face to face meeting on June 17<sup>th</sup>.**

**Columbia River Regional Forum**  
**TECHNICAL MANAGEMENT TEAM –OFFICIAL MINUTES**

**June 10, 2015**  
Minutes: Pat Vivian

**1. Introduction**

Representatives of Washington, Idaho, CRITFC/Umatilla, NOAA, Colville Tribe, USFWS, BPA, COE, BOR and others participated in today's TMT meeting. Doug Baus, COE, chaired the discussion, with Emily Plummer, DS Consulting, as meeting facilitator. This summary is an official record of the proceedings, not a verbatim transcript.

**2. Water Supply Forecast Update**

Baus introduced Julie Ammann, the new chief of RCC. He and Mary Mellema, BOR, gave official June water supply forecasts for individual projects (also posted to today's agenda):

- Hungry Horse (June-July) – 515 kaf, 60% of average.  
(January-July) – 2026 kaf, 97% of average.  
(April-Aug) 1382 kaf, 71% of average.  
(May-Sept) 1076 kaf, 64% of average.  
Minimum flows are still 3500 cfs at Columbia Falls and 900 cfs at Hungry Horse.
- The Dalles (April-August) – 61.6 maf, 70% of average.
- Lower Granite (April-July) – 11 maf, 54% of average.
- Libby (April-August) – 5090 kaf, 86% of average.
- Dworshak (April-July) – 1113 kaf, 42% of average.  
(June-July) – 228 kaf, 25% of average.

**3. Operations Update**

Grand Coulee elevation is 1266.5 ft, continuing on a refill trend, Mary Mellema, BOR, reported. Hungry Horse is at elevation 3547.8 ft, discharging 2.5 kcfs.

**4. Treaty Fishing**

Tom Lorz, CRITFC/Umatilla Tribe, introduced two treaty fishing requests, SOR 2015-C3 (in effect from June 2-June 5) and SOR 2015-C4 (in effect from June 9-11). The two SORs represent the last of the spring fishery, with summer treaty fishing set to begin June 15.

The spring chinook run forecast has increased to an estimated 250,000 adults, which is well above average, Lorz reported. Baus asked when the next treaty fishery SOR might be scheduled. Adult data from a net flight will be available to the tribes for review

tomorrow morning, June 11, Lorz said. If counts continue to be high, there could be another treaty fishery starting Friday, June 12.

### **5. Dworshak and Lower Granite Water Temperatures**

Hot weather is driving river temperatures up, Steve Hall, COE, reported. Lower Granite tailwater temperatures are already approaching 64 degrees F. Using 2001 and 2005 as analog years, the COE has been running temperature models to determine when temperature augmentation should start. Temperatures at Lower Granite are expected to approach the 68 degrees F criteria next week. Tracking inflows, it's possible the model will indicate temperature augmentation should start as early as Saturday, June 13. Dworshak is releasing 3 kcfs now and inflows are receding. Temperature augmentation also began in mid-June of both 2001 and 2005, although Hall said 2005 is considered the closest analog year.

Joe Skalicky, USFWS, asked whether the region will run out of water sooner if temperature augmentation flows start 2-3 weeks early. It's possible, Hall replied, because Dworshak has to reach 1535 ft elevation by end August. The reservoir could hit 1535 mid-August if flows start mid-June, but a lot depends on how the water is used.

The project is releasing 42 degrees F water now, with unit 2 in overshoot mode. This is a bit cold for the Dworshak National Fish Hatchery, but this time of year frequently targets 43-44 degrees F water. With water temperatures 2-3 degrees cooler than usual, the hatchery fish are about a week behind in terms of growth, but there's no cause for concern at present. The COE is also coordinating Dworshak operations with the hatchery.

Charles Morrill, Washington, asked whether temperature or volume is the primary concern. It's water volume, not temperature, Hall replied. There's a reservoir of about 5 maf of additional cold water before warm water will run through the powerhouse. Warm water doesn't penetrate far into Lower Granite reservoir, even if temperatures are high.

Russ Kiefer, Idaho, expressed concern that the cool water is already around 15.5 degrees C, when in 2001 and 2005 reservoir temperatures were uniform. Hall acknowledged the pool is indeed heating up. Lower Granite reservoir will stratify better as summer progresses.

Baus asked how temperatures will be managed if augmentation flows start on June 13. The objective is to allow tailwater temperatures to approach but not exceed the 68 degrees F criteria while using as little additional water as necessary, Hall explained. The ultimate goal is to make the cool water last as long as possible.

Morrill asked whether any progress has been made in establishing a way to monitor wind conditions at Lower Granite pool. The COE is in the process of procuring weather equipment now and expects to install wind meters on the Lower Granite pool that will help monitor the effects of wind on reservoir temperatures and stratification, Hall said.

A few years of data collection and analysis will be needed before the information will provide the ability to respond to wind conditions.

TMT will be notified via email if augmentation flows begin on June 13.

## **6. Next TMT Meeting**

The next TMT meeting will be in person June 17. A Dworshak operations update and an update on treaty fishing will be on the agenda.

<b>Name</b>	<b>Affiliation</b>
Charles Morrill	Washington
Russ Kiefer	Idaho
Tom Lorz	CRITFC/Umatilla
Trevor Conder	NOAA
Sheri Sears	Colville
Joe Skalicky	USFWS
Scott Bettin	BPA
Doug Baus	COE
Mary Mellema	BOR
Lisa Wright	COE
Julie Ammann	COE
Steve Hall	COE
Laura Hamilton	COE
Tina Lundell	COE
John Tinker	Seattle City Light
Dave Lawson	Thompson Reuters
Margaret Filardo	FPC